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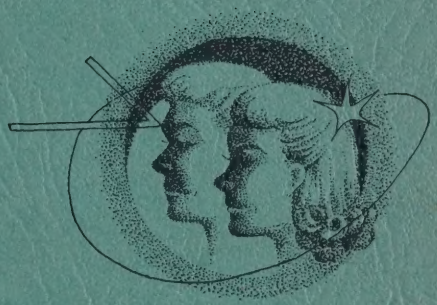
Challenging THE ABLE LEARNER



• INTERMEDIATE GRADES

Curriculum Bulletin 401
CINCINNATI PUBLIC SCHOOLS
1957

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Challenging

THE ABLE LEARNER

INTERMEDIATE GRADES

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1957

dren and prepared supplementary materials to foster the further enrichment of the program for these pupils. Two bulletins, Number 301 for primary teachers and Number 401 for teachers of intermediate grades, are the result of the work of the committee.

The committee has recognized, quite properly, that experiences for able learners grow in large measure from the needs and interests of the individual child, and from the context of the classroom situation. Thus, they considered it impossible and undesirable to supply teachers with a prescribed list of activities in which every able child should engage. Instead, a great variety of activities appropriate for able learners is offered. These activities have been gleaned from the experience of teachers working with able children and from the study of professional literature. Teachers are encouraged to select from and adapt the ideas presented. Many of the suggestions are designed to challenge children to pursue personal interests.

Grateful appreciation is due the committee for their contribution to this aspect of the program. The members of the committee were as follows:

Lillian Ciarniello, Chairman of a Sub-committee, Kindergarten - Grade 3

Robert Englert, Chairman of a Sub-committee, Grades 4 - 6

Clara Anish
John Bagnoli
Harriet Bandy
Richard Bickett
Alma Coffey
Gertrude Coles
Mildred Crouch
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Ann McConnell
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Louise Rairden
Rosina Ratterman
Celia Scarborough
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Marjorie Simeone
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Ruth Thornburgh
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Naomi White
Frances Wildey

The following art and music teachers compiled the suggestions for those subjects in the bulletin for intermediate teachers: Ann Bauer, David Henneberg, Elsie P. Long, and Kathryn Mollohan in art; Lona Black, Erma Davis, Grace Eilert, Anna Marie Gantner, and Charlotte Perso in music. The supervisors contributed generously of their time in advising the committees and in reviewing materials.

Thanks are due Mrs. Louise Rairden and Miss Georgia Meyer for editing the materials. Acknowledgment for photographs is made to Gilbert Corlett, Marsden Gribbell, and the Marsh Studios.

The point of view represented in these bulletins - exploration of many areas and interests rather than early specialization - is a sound one for elementary children. The bulletins are presented to teachers, principals, and supervisors with full confidence that they will supplement in a material way the present courses of study and will expand the opportunities for able children to develop their individual talents and to discharge their social responsibilities.

Robert P. Curry
Assistant Superintendent

Approved:

Claude V. Courter
Superintendent of Schools
July, 1957

Challenging the Able Learner

Grades Four, Five, and Six

TABLE OF CONTENTS

FOREWORD iii

Table of Contents vii

Chapter I. Introduction 1

Section One

Chapter II. The Able Child. 5

Chapter III. The Program and the Able Child 15

Section Two

Chapter IV. Language Arts 25

Chapter V. Reading 39

Chapter VI. Arithmetic 45

Chapter VII. Social Studies 53

Chapter VIII. Science and Health 63

Chapter IX. Physical Education 71

Chapter X. Art and Crafts 75

Chapter XI. Music 79

BIBLIOGRAPHY 82

A YOUNG ARTIST TAKES PRIDE IN A SELF-PORTRAIT

CHAPTER I. INTRODUCTION

America's children are her most precious resource. The formative years that include those spent in the elementary school are important ones during which the child forms his concept of himself as a worthy person, capable of developing into an adult who can contribute to his own well-being and the welfare of society. The schools seek to have every child develop to his fullest. In this bulletin attention is focused on those children who seem capable of making an outstanding contribution.

Public education should welcome the increased demand for trained leadership in fields such as government, business and industry, agriculture, medicine, education, religion, and the arts. Teachers face a growing challenge to discover potential leaders early, to develop their ability to think, to nourish their talents, to extend their skills, and to interest them in selecting productive careers. Toward meeting this challenge, the present bulletin has been prepared.

Who Is the Able Child?

The definition of the child for whom the activities in this bulletin are planned is an elastic one. As teachers evaluate their work to insure that their program is a challenging one for every child, they call to mind the child in the class who grasps abstract ideas easily, who learns more quickly, and whose performance is superior to the majority in the class. Such a child needs special challenge and additional learning opportunities, whatever his absolute ability. For the purposes of this bulletin, the able learner is the child whose ability and performance exceeds that of the class as a whole. This definition places on every teacher the responsibility of finding the most capable pupils and challenging them with a program to fit their needs.

This adaptation of program is not contrary to the basic tenets of democracy. All children have the right to fullest nurture, but the nature of the guidance and stimulation to be provided will vary, to the end that each child learns in his own best way and in terms of his endowment.

Purpose of the Bulletin

The purpose of this bulletin is to help elementary teachers in identifying the able learners in their classrooms, to present a point-of-view for teaching these pupils which is compatible with current research, and to offer practical suggestions for carrying out and evaluating a sound program.

This bulletin is to be regarded as a resource, not as the course of study. That official plan is already described in the New Primary Manual[1] and the New Intermediate Manual[2] which now contain much practical help for teaching capable pupils. This new supplement makes additional materials available. The teacher will select for use from both publications what seems most appropriate in her situation. She may also use the ideas presented as criteria for determining the worth of activities which she - or her able pupils - originate.

If this bulletin proves stimulating to teachers and, through them, to able pupils, it will have fulfilled its purpose; if it stimulates all pupils, through the able ones, then it will have more than fulfilled its purpose!

Organization of the Bulletin

The volume is presented in two parts. Section One deals with the identification of the able child and the general nature of the program that should be provided for him. Section Two describes, under each subject field, enterprises for extending the learning experiences of capable children.

[1] New Primary Manual, Curriculum Bulletin, No. 300. Cincinnati Public Schools, 1957.

[2] New Intermediate Manual, Curriculum Bulletin, No. 400. Cincinnati Public Schools, 1957.

SECTION ONE

Chapter II. The Able Child

Chapter III. The Program and the Able Child

LITERATURE COMES ALIVE IN A DRAMATIZATION OF "LITTLE WOMEN"

CHAPTER II. THE ABLE LEARNER

The definition of the able learner given in the Introduction is an inclusive one. According to this definition, able children are to be found in every part of our city, at every economic level, and in every racial, national, and religious group. The number of able learners in a room may vary from one or two, to a small group or a sizable number.

"Ableness" will vary, not only in degree but also in the number and extent of areas where it is revealed in children. A capable child may display more aptitude in one field than in another. He may be superior to the average group in which he is enrolled, or he may be extraordinary even in a group of very capable children. In either case, the teacher can perceive some quality that distinguishes him from his classmates - a growing edge which is highly responsive to instruction. Terminology per se is unimportant for the purpose of this bulletin. What is important is that the able pupil be identified early and challenged.

Identification

Not all capable children stand out in the class. The child with good ideas, maturely expressed, must be distinguished from the merely loquacious, the facile worker from the performer who shows originality and creativeness.

It is the purpose of this section to provide a guide for identification that will be helpful to busy teachers. For this reason, the emphasis in the list which follows is on the characteristics which an alert teacher can observe. Of course, no one child would embody all these characteristics. It is important to remember that these children share common characteristics with all children. In many ways they are similar to their playmates of the same age. Physically, as a group, they are healthy, well-developed, alert-looking, and full of energy.

Characteristics to Observe

In general, the able learner has these mental characteristics:

Learns at a rapid rate; grasps ideas quickly

Has an inquiring mind, is curious; seeks additional information

Seeks to substantiate information

Is bored with repetition, routine, rote

Has good powers of concentration

Is able to follow complex directions

Uses insight rather than mere memorization

Makes generalizations; uses abstract ideas early (concepts of time, deity)

Can select and organize materials and ideas

Is creative

Has superior language ability, with wide vocabulary

Is interested in books; likes to read

Tends to work at a rapid rate

Is able to analyze and work out solutions to problems.

The able learner tends to show these social and emotional characteristics:

Is emotionally stable

Has a good sense of humor

Gets along well with others

Carries responsibilities well

Is aware of what is going on in neighborhood, community, nation, world

Shows leadership ability; respects ability

Tends to associate with those of same mental age

Is persistent

Profits from suggestions and criticism; is self-critical

Gives suggestions to carry a group ahead

Has many interests and hobbies; likes to play complicated games.

Other Means of Identification

School Records. - In her effort to identify the able learner, the teacher will also turn to school records raising such questions as these:

Is his mental age relatively high?

Do his test scores show high achievement?

Do teacher anecdotes indicate special ability in a particular field?

What does his health record reveal?

Interview and Study. - The teacher will also find it helpful to gather information through talking to and studying the child.

Who are his companions?

What are his interests?

What are his hobbies?

To what clubs does he belong?

What does he do in his spare time?

What books does he read?

What television programs does he watch?

Observation in the Group. - The teacher can recognize this child as she observes him in the group at work.

Can he listen well?

Can he follow directions?

Is his span of attention longer than most?

Do others turn to him for help?

Is there originality in what he does?

What do informal tests indicate as to his ability?

Does he display a general fund of background knowledge in discussions?

Does he have an extensive vocabulary and mature sentence patterns?

Is his leadership respected?

COMMITTEE WORK STIMULATES INDIVIDUAL RESEARCH

Home Situation. - The parents and home background of the child may give further indication of his ability.

Is his home background superior for the community?

What is his place in the family?

Do his parents report unusual interests or early accomplishments?

Snapshots of Able Learners

The preceding generalized discussion concerning identification comes to life in the snapshots which follow. These are descriptions written by classroom teachers about able learners whom they have discovered in their classes. The children described differ markedly from each other. The discerning reader will find implications for needed guidance.

I. David is a tall, lanky lad of seven, with dark shiny hair and sparkling big black eyes. He comes in each morning with a quiet observation of something that has happened on the bus -- "the thing" may be anything and frequently has nothing to do with the bus.

David's manners are beautiful. The children love him; he wins or loses with little display of emotion. He is most helpful to the other children. At play time he selects a complicated game and welcomes any three children who wish to play with him. He constantly reminds his group of "quiet voices" during free time.

David reads at high fourth-grade level and is an avid reader. Many times when I am working with another group, I hear his chuckle, and there he is at the library table completely absorbed in a story.

During a recent class study of the post office, he was the one who brought an encyclopedia volume and read to the group on the history of the mail. He was the one who suggested a mural depicting the history of communication from cave men to air mail today He was chairman of the group studying "sorting the mail,"and when we took the trip to the Post Office Annex, he stopped his group to chat with one of the clerks. He suggested that his committee take a turn at sorting; to my surprise the clerk allowed each child to sort a handful of mail.

The other day, David walked into class with a bag containing a fish bowl, glass bottle, candle, matches, and cake coloring. He announced that he had watched a television program and wanted to show the children a particular experiment he had seen. We gathered around as he set up his equipment. He explained, at the children's level of understanding, that when an air-tight jar is placed mouth down over a burning candle so that the mouth of the jar is immersed in a vessel of

water, the oxygen in the jar is partially consumed by the burning candle; this causes a difference in air pressure between the air in the jar and that in the room, causing the water level to rise in the mouth of the jar.

David has called all of his adult friends who have kindergarten-aged children and has offered his services for their after-school parties. He will show one hour of films on his eight millimeter picture projector for fifty cents and usually has two or three engagements a week. He uses half of all his earnings to buy new films and keeps the other half. He has never suggested that he should assist his mother with the gas bill for her taxiing, although his mother has to drive the car and help carry his equipment to all these affairs; she does not seem to think this an important issue.

II. Jean is an attractive six-year-old in the first grade in a basin school. She and her sister are quite companionable. Since the mother works, the children are left with the responsibility of caring for the home, which has made them mature early.

In kindergarten Jean's work was far superior to that of the other children. She was truly an artist. Her drawings, besides having a theme, had depth and perspective. She was usually chosen by the children to be chairman of any art activities.

Jean grasps her school work quickly and easily, always selecting the most difficult independent work for herself and helping less able children with theirs. She loves to read. Besides reading the books in our room library, she brings many from the branch library to share. In arithmetic she is among the first to finish; then she works problems of her own.

One day Jean brought in a set of paper puppets and a stage, made at home, and asked if she might have a show. Her story was an original one and she took the parts of all characters, singing original tunes for some.

I suggested that she write her own stories instead of copying class ones from the board. She decided to put her stories in book form and has been invited to read them to other classes. For the spelling of new words, she uses a picture dictionary or tries to work the words out herself before asking me for aid.

I am kept busy planning activities that will be a challenge to her.

III. Philip the fixer! His loves are the movie projectors around the school building. He wasn't satisfied to operate just one; he had to learn how to thread all three. Then he made diagrams for other projectionists, in case he was absent. Our fifth-grade class runs the noon movies; Philip is the manager and a well accepted one because of his ingenious ideas. He rigged up a microphone at the projector and loud speakers on the stage to announce the movies and also to control traffic in the auditorium.

During the Christmas play, he ran the spotlight and colored footlights. He was not content with a mere white light, but worked out a diffused light effect which seemed to give greater depth to the stage.

Philip brings in gadgets which he has constructed, many to the amazement of the other children. His gadgets usually contain a system of bells, switches, pulleys, and batteries, which perform various operations. He takes great pleasure in explaining why certain things happen as he operates his gadgets. The children have jokingly dubbed him "The Wizard" and he likes the name. If anything needs repairing from a jammed zipper to a scraping cloakroom door, Philip is called upon. He revels in such jobs.

But he dislikes to write, although his penmanship is very acceptable. He is able to share material which he has read, but puts off taking notes for future reference and discussion. He can tell a story that charms all the others since he has such a vivid imagination and a provocative twist of words. He relies on this talent to put him across with the teacher and the class. Not long ago he dictated a small play based on a story we had read. The other child, Philip's secretary, added a few remarks, but Philip was the playwright. He enjoyed being the top man who handed out the information orally, but couldn't be bothered to write it.

The teacher needs to be able to identify the potentially high achiever who may not evidence many of the characteristics of the able learner. This child may have failed to develop his potentialities for several reasons, such as ill health, physical defects, lack of a sufficiently challenging school program, deep seated emotional problems, and the like. Children who have high mental test scores and who do not show comparable achievement should be given consideration to determine the causes of retardation and measures should be taken to remove these obstacles, when possible.

IV. Larry is an able learner, but when you look at his efforts to express himself in writing, you ask, "How can he be?" When he expects special privileges for himself and is very critical of others, you ask, "Can he be?" As he nervously fingers pencils and crayons on his desk and the hair of the boy sitting in front of him, instead of being engrossed in the work assigned to his group, you are not quite sure he belongs in the third grade at all. When he misspells more than half the words in the spelling list chosen by his group for this week's lesson, you again question his ability.

But in arithmetic when he mentally solves the problems correctly, even though he cannot place the figures properly on paper, you begin to believe he has ability - at least with numbers. And when he monopolizes the discussion period, using an excellent vocabulary for a

third-grader and holds all spellbound with wild exaggerations of the things he has to contribute to the exhibit the class is making in relation to the communication study unit, you know you have an able learner - one exhibiting the scars of many unproductive hours spent at home and at school.

You find yourself depending on Larry to read and report from your more difficult resource books and you are delighted, along with his classmates, to hear his interpretation of the characters he reads about - although he still drops words and phrases and substitutes his own. So it comes with little surprise to hear from the psychologist, to whom you have referred Larry for testing, that he has an I.Q. of 133.

V. Harry is a fifth-grade boy with an I.Q. of 143. His reading score is 6.4. He says he does not like to read and never does so if he can avoid it. While he does all his school work passably well with little effort, he never makes a comment unless called upon directly. When so challenged, he makes an apt and intelligent comment, but as meager a one as possible.

In appearance, Harry is tall, good-looking, and physically fit. He refuses to take part in sports, although he does fairly well in gym. He prefers to sit in the corner and to be let alone. He treats his peers with the same remote indifference which he gives to his school work.

Needs of the Able Learners

Generally, the able learner has the same needs as all children, but the satisfying of these needs may pose special problems to him or to others.

Physical Development

All children have physical needs: to have food, clothing, shelter, nurture, and to progress through successive phases of development at an appropriate pace. The able child usually shows up well physically. If he is associated with older children, however, he may have difficulty in competing physically with them. Since physical skill is so prized by children in the intermediate grades, the lack of skill may be a handicap to acceptance by his group. Some able children spurn physical activities and need to be encouraged to engage in them.

Security

All children need the sense of security that comes from being a member of

a group in which they are valued for themselves and not alone because of what they can do. Children need to make friends and a place for themselves among their age mates. When the abilities and insight of a child too far outstrip the other members of his class, he may need help in making a place for himself in the group. He must learn to accept and appreciate others as well as himself.

Achievement

All children need to have a sense of achievement. The able child needs a challenging curriculum which develops his skills. He needs to be equipped with the tools and techniques that will enable him to perform successfully. He needs to set attainable goals and to develop self-direction in his endeavors. He should be given responsibilities of the kind that will develop an awareness of his responsibility to society as a whole. His sense of achievement is extremely important to the able child because his ability may make him too self-critical.

Recognition

All children need recognition. This fact is as true for the able learner as for any other child. He should be given credit for what he does well, but not in a way that sets him too much apart from others. Recognition should be granted for development of personality traits as well as intellectual achievement.

New Experiences

Children need to extend their horizons. At the elementary level, especially, children should have opportunities to explore many interests so that later specialization may be built upon a broad base.

POSTERS STRESS IMPORTANT HEALTH LEARNINGS

CHAPTER III. A PROGRAM FOR THE ABLE CHILD

Nature of Program

Having identified the child with learning aptitude or special talents and ascertained his needs, the teacher strives to make the school program challenging to him. Certain features are identified which should characterize the school situation and the quality of activities which are provided.

Earmarks of a Good Program

A good program stimulates purposeful activity in the direction of worthwhile goals. Geared to the potentialities of the able child, it develops good work habits and extends skills and knowledge at an appropriate rate; it cultivates talents and interests and inspires creativity. To maintain balance, it provides experiences which contribute not only to intellectual growth, but to a well-rounded personality.

Such a program presupposes a total school environment of rich learning experiences through which the able child acquires both breadth and depth in each area of the curriculum. This environment includes a wealth of materials with manifold opportunities for research. While not teacher dominated, it offers the able learner skillful guidance from the teacher. The atmosphere is such that the child feels free to make choices and develop his own ideas, accepting, of course, the responsibilities that accompany such freedom of activity. He is not afraid to make mistakes but, through reflective thinking, learns from his failures as well as from his successes. To meet the needs of the able child, a program certainly must be flexible and provide a variety of experiences.

Criteria for the Selection of Activities

It is the responsibility of the teacher to guide the selection of learning activities for the able child. For such a child the following criteria are

significant, although not every activity will satisfy every criteria.

Is the activity worthy of the time it will require?

Is it geared to his functional level?

Will it lead to further learning or activity?

Will it extend skills or knowledge?

Will it satisfy a personal need?

Does he have the research skills the activity requires?

Is he able to plan, execute, and evaluate his work, with teacher guidance when needed?

Promising Ways of Working with the Able Child

The able child in the classroom is entitled to those experiences through which he can achieve optimum development at a maximum rate. The following ways of working are appropriate for all children, but particularly so for the able child.

Group Work

Grouping for a skill subject, such as reading, permits the able child to further refine and extend his skill and to use this advanced skill independently in many and varied situations.

Research groups offer the able child the opportunity to assume leadership, to contribute a wealth of information to his group, to use reflective thinking in problem solving, and to make progress reports which are evaluative and give direction to the group. There is a reciprocal relationship between the group and the able child; the group works more rapidly and smoothly because he is a contributing member, and he profits from the experience of working and sharing with others.

Added Privileges and Responsibilities

The teacher should extend to the able child privileges so long as he accepts

his share of responsibilities. Whenever possible, he should be permitted to make his own decisions and should learn to accept the consequences. He should have freedom at times to select and plan his own activities and to use materials of his choice.

Special Assignments

Special assignments for the able child should be challenging and commensurate with his ability. Many routine tasks do not provide this challenge, and, therefore, should be avoided. The following are suggested:

Make contacts requiring a high degree of responsibility with other rooms.

Meet and talk with visitors.

Arrange excursions or unusual experiences for the class.

Write letters representing the class.

Participate in varied school activities; e.g., a P.T.A. program.

Use current materials widely.

Explore and use community resources.

Pursue individual projects related to the curriculum or a special interest.

Locate information for class use on a topic of group interest.

Recommend books to be added to the class library.

Recommend games to be added to the supply of room games.

Leadership Opportunities

Leadership opportunities should be made available to the able learner through such activities as the following:

Student government

Safety patrol

Playground leaders

Chairman of various room and school committees.

Teachers and Parents Work Together

Teachers and parents share responsibility for the optimum growth of the able child. Since this is their common concern, it is desirable that they seek mutual help in understanding him so that together they may provide for his continuous self-development.

Parent-Teacher Conference

Much is to be gained by a parent-teacher conference early in the school year. The school needs an opportunity to interpret its program to parents and to plan with them ways in which it may be supplemented by the home. There are many experiences available to able children which often the school is unable to provide. Parents and teachers together should explore these possibilities; for example, the opportunities offered by the Art Museum and Natural History Museum. Camp experiences or science field trips under the leadership of a naturalist may be available. Perhaps the child should be permitted to use more fully the facilities of the public library for research purposes. It is advisable that the teacher be aware of special events which may interest the able child and call it to the attention of his parents.

Parents of an able child often fail to realize their child's potential ability. It is the responsibility of the school to make them aware of this and to help them realize their responsibility for him. To convey this to parents, the teacher should depend upon a discussion of the child's classroom work and illustrations that show him to be an able child. Parents may substantiate the teacher's opinoin by relating anecdotes about his early childhood and his life at home. The actual Intelligent Quotient of the child need not and should not be discussed.

Parents often are eager for their child to do quite advanced work and sometimes are inclined to push him to achieve. It is well to indicate to parents that work that is too advanced will create gaps both in skills and in knowledge,

and to point out the danger that exists in constantly pushing a child for maximum achievement.

Parents often need to be made aware of the child's need for a well-rounded, balanced program of activities which fosters, in addition to intellectual development, the development of physical and social skills. Does he know how to swim? Does he know how to play an organized game, such as baseball? Is he having social experiences on his own maturation level, with adolescent experiences reserved for adolescence? Is he a happy, well-adjusted child who is achieving at a high level?

At some time during the school year, the teacher and parents need to discuss future plans for the child. What are his goals and aspirations? Does he plan to go to college? Will his family be able to afford college or will he need financial assistance? A discussion such as this should come about naturally and, as with all children, should be prompted by the teacher's genuine interest in the child.

School Visitation

Parents should be invited to visit the classroom to observe regular classroom activities and procedures for the able child as he works as a member of the class. It is also an occasion to invite parents to school when the child has made some outstanding achievement. After such a visit, it is advisable for the teacher to arrange time to discuss with parents what they have observed.

Parent-Teacher Association

The school could take advantage of a P.T.A. meeting to interpret its program to parents. At such a meeting, some time can well be devoted to the able learner. Following the program parents and teachers should meet in the classrooms so that the teacher might discuss with them her particular program and ways of working. Through participation in a parent study group, parents often learn to understand their child and his problems better.

Evaluating and Recording Progress

Evaluating Progress

For the able child, evaluation is broader than measurement against grade standards and report card grades based on a group comparison. Rather, evaluation should include appraising growth toward goals that have been determined both by the needs of the child and by the needs of the society.

In school, at home, and in the community the able child has many experiences which help him grow. In evaluating these experiences the teacher should consider the extent to which they are providing the child with a well-rounded program which not only promotes intellectual growth, but also contributes to physical development and leads to social and emotional maturity. Because of these experiences, does the teacher see new learnings emerging which result in changes in behavior or attitudes?

The questions listed below indicate an appropriate breadth of consideration and may serve the teacher directly or as suggestions for planning her own check list for evaluating the progress of a capable child.

Is he widening his area of interest, activity, and responsibility in home, school, neighborhood, community?

Is he adjusting well to new people and new situations?

Is his growth well-rounded and commensurate with ability in physical, social, and emotional aspects?

Does he work with more self-direction, concentration, efficiency, creativity?

Is he achieving at significantly higher levels?

Is he attacking harder problems and processes, and with advanced techniques?

Are his questions more penetrating, his interpretations sounder?

Is he showing evidence of growth in his social relationships?

Is he making progress in facing his needs and in attacking them?

Does he show zest for learning and eagerness to participate in new experiences?

Evaluation is most effective when the child has had an opportunity to share in setting goals and is actively involved in evaluating progress toward them. Although this procedure usually involves parents and teacher working cooperatively with the child, the able child's ability to evaluate himself is not to be neglected, for he is capable of a very realistic appraisal of his strengths and weaknesses as reflected by his performance and products. Plans for future activities often emerge from such an evaluation as the able child redefines goals and works toward them. All children need to experience a personal feeling of satisfaction and adequacy. If the goals of the able child are not realistic, his inner feelings may reflect inadequacy and continued frustration. Realistic and attainable goals encourage productivity and help the child accept the fact that there may be some areas in which he will not excel.

Ways of Recording Progress

For purpose of evaluation, the teacher needs significant ways of recording evidence of progress. Since the following ways supplement each other, it is suggested that the teacher not rely too heavily on any one method but use a combination of several which will include actual classroom performance as well as achievement test scores.

Anecdotal Record. - An anecdotal record of the able child's activities provides the teacher with clues to his strengths and weaknesses and his personal goals. Such a record offers invaluable guidance in planning a school program for the child.

Individual Records. - An individual record of day-to-day activities kept by the child encourages a balanced program. Although such records, because of the ingenuity of the able child, may assume quite a complicated form, a simple diary form with an entry made at the end of each day is very effective.

Check List. - A check list composed cooperatively by the teacher and child keeps both aware of goals and progress toward them.

Individual File of Work. - A file of the able child's work is of great value in discussing his progress with parents and in helping his next teacher make plans for him.

Achievement Tests. - Achievement tests indicate to the teacher the approximate level on which the child is working.

SECTION TWO

Chapter IV. Language Arts

Chapter V. Reading

Chapter VI. Arithmetic

Chapter VII. Social Studies

Chapter VIII. Science and Health

Chapter IX. Physical Education

Chapter X. Art and Crafts

Chapter XI. Music

THE MASTER OF CEREMONIES SPARKS A PROGRAM

CHAPTER IV. LANGUAGE ARTS

Oral Expression

The able child who is skilled in oral expression can be a valuable asset to his group. Others will be encouraged to listen, follow, and appreciate what he says if his thoughts are well organized and presented in logical sequence. He should be able to organize and present an informational report in such a way that the listeners receive the full impact of its meaning. To be able to express thoughts spontaneously in any oral situation, he needs an adequate vocabulary and skill in the use of the English language. To be most effective, he must develop sensitivity to an audience and preside over a group with poise. The able child who reflects meaning and feeling when he reads poetry and prose aloud is a pleasure to his classmates. Important to all success in oral expression is a pleasant voice.

To develop increased skill in oral language, he needs many and varied experiences as suggested by the following:

Preside over own class, both in presence of and absence of teacher.

Present materials to an adult audience.

Direct and participate in creative dramatics.

Participate in debates on challenging subjects.

Conduct committees and class meetings using parliamentary procedure when the maturity of the group warrants it.

Select and prepare a story for sharing orally with another grade group.

Plan a play for a particular age group and present it to that group.

Explain with clarity a technical subject, such as a factory operation or some astronomical phenomenon.

Discuss a Children's Theater presentation; tell how the plot developed and analyze character development.

Analyze critically a television program.

Present a synopsis of a magazine or newspaper article to the class in such a way that it is fully comprehended.

Read aloud various types of poetry, observing rules of poetic expression.

Contribute to class discussions in a positive way so as to carry them forward.

Analyze voices of others to determine the tone, speed, and volume of a pleasant voice; work to develop these qualities in his own voice.

Listening

Helping an able child listen attentively and respectfully to the ideas and opinions of classmates, even though they may be less advanced than his own, will aid him in establishing good rapport with his group. He can learn to recognize ways he, as a listener, can help a classmate express his ideas, perhaps by a tactful question or by giving an example to support a point made.

At the other extreme, the able child needs to develop mature listening skills as he seeks information from some adult by following a sequence of ideas or a line of argument, and by being on the alert for examples that will help him make the ideas presented understandable to his classmates.

Appreciative listening also should be developed, for such a child should learn to sense occasions when he should assume a receptive attitude which enables him to absorb and enjoy rather than analyze and criticize. To develop listening skills, the able child may:

Listen for a week to broadcasts by a news reporter and a news commentator to note differences.

Serve as an observer to a class discussion in order to summarize it or to list points made by class members for or against a proposed plan of action.

Listen to commercials advertising different brands of some product, noting the emotionally-tinged general terms, any sweeping statements unsupported by evidence, and conflicting claims of competitors.

Analyze two talks on the same subject; try to determine why one was more interesting than the other.

Listen to an adult lecture on some topic of interest, taking notes for building into an outline which distinguishes between major and minor points.

Plan an interview with an adult with specific questions in mind; organize the information received for later presentation to the class.

Make a comparison between getting information by listening or reading; point out the advantages and disadvantages of each for various purposes. Compare the devices used in the two media to show organization or transition of ideas.

Report to the class on a talk which showed bias on the part of the speaker; give evidence of this bias.

Listen to speeches or broadcasts which include anecdotes, examples, or jokes. Evaluate the audience appeal of these devices.

Listen to plays or poetry read aloud to enjoy the portrayal of mood or characterization and to note appropriate choice of words.

Translate the feelings evoked by listening to music, sounds in nature, or industrial sounds, through art, verse, story, or dance.

Written Expression

In written expression the able child needs to have creative ability and the ability to express his ideas according to correct written form; a balance should be maintained between the two. Because the capable child has so much to say, his desire to express himself often goes beyond his skills. Therefore, his need for technical skills must be met as they develop, often on an individual basis.

Techniques of Written Expression

Sentence Development. - The able learner often writes sentences of greater complexity and effectiveness than the average child. He should know that variety can be obtained by use of complex, compound, and inverted sentences; questions, statements and exclamations; descriptive phrases; repetition for emphasis; and colorful vocabulary.

Vocabulary Enrichment. - The capable youngster should learn to appreciate words and be discriminating in their use. He should become acquainted with various meanings of words, picturesque words, implied meanings, and figures of

speech. He needs to know the sources to which he can turn for assistance, such as a large unabridged dictionary, a rhyming dictionary, a thesaurus, or an English handbook.

Paragraphing. - How to develop a paragraph as a unit of expression; how to write topic, summary, and transitional sentences; and how to organize a paragraph to contribute to his purpose are valuable skills which superior children can learn in the elementary school.

Note-taking. - Note-taking by a skillful pupil will follow almost outline form, except that it need not observe the same strict rules. He should note the orderly arrangement of ideas as he listens or reads. Specifically, in planning an original talk or any written work, the able child should be taught to jot down ideas as they occur to him and to assemble these ideas under appropriate headings.

Outlining. - A comprehensive form of outlining may be explained to the able pupil if he evidences a need for it. He is capable of understanding and using parallel construction and should be taught to include in an outline both an introductory topic and a concluding one. When giving a full oral report, he should be encouraged to do so from an outline, using separate cards or separate topics. The following is an actual example of how an able sixth grader extended an outline from a simple to a complicated form. Under the title, "Artists of the Middle Ages," there appeared:

III. Leonardo Da Vinci
  A. Painter
    1. "Mona Lisa"
    2. "Last Supper"
  B. Sculptor
    1. "Moses"
    2. "David"

and so on through other topics until the final one:

  H. Inventor
    1. Air machines
      a. Helicopter
        (1) Shaped like pyramid
        (2) Operated by propeller-type screw
        (3) Driven by spring mechanism like clock

b. Airplane
(1) Operated by person lying inside
(2) Propelled by arms flapping in wings and feet pedaling
2. War machines
a. Machine guns
(1) Rotating ten-barrelled
(2) Alternating three rows of twelve barrels each
(a) one fired
(b) one loaded
(c) one cooled
b. Cannon

and so on to the end of the topic.

Functional Grammar. - Grammar is the means through which children learn to express themselves effectively in accordance with a system of standards. The teaching of grammar is based on the needs of children and should follow usage. Able children feel the need to know more advanced skills in punctuation, sentence structure, and some of the finer points of English usage in their writing.

The able child often formulates rules for himself. When the child, whose fault in story writing is his tendency to shift from one tense to another, has his mistake explained to him, he makes a simple rule for himself, "Do not change from past tense to present and back again when telling a story."

When a youngster's writing reveals the need to delve more deeply into the complexities of the English language, the teacher explains to him the rules he needs to know in order to communicate his ideas correctly and clearly. The child is held responsible for maintaining as high a degree of accuracy as he can. When a sixth grade boy write, "Alexander did not die a heroic death in battle, he caught a fever on his way home" and admits he knows it is wrong, the teacher explains the use of the semicolon between two or more clauses too closely related to be separate sentences. When such a boy further indicates that he never is quite sure when to use semicolons and colons and asks for a rule, the teacher explains that a colon is used after such expressions as "as follows," "the following," "these two reasons," and the like.

To promote correct usage, the teacher should explain to the able child why

common incorrect usage is grammatically unacceptable. When a child learns that "to" as a preposition must take an object and that "whom" is the objective form of "who," then he realizes why it is correct to say, "To whom should I give it?" rather than, "Who should I give it to?" When the child who says, "He only ate one cake," realizes what he actually is saying, he understands why the adverb must be closer to the word it modifies and says, "He ate only one cake."

The able child who comes from a home in which he hears incorrect English presents a special problem. Here it is the school's responsibility to make him aware of correct usage and to place before him at all times exemplary standards which, in all probability, he gradually will adopt.

Spelling. - Correct spelling is an important part of any writing and the able child should maintain high standards of correctness in all written work. Since his vocabulary quite often is advanced, he needs to master the spelling of words which he will want to use frequently. He may need help in establishing a way of keeping a record of these words and discovering effective methods of study. Although his personal spelling list will occupy a major part of his spelling time, he should take the pretest of the words in the weekly spelling lesson before being excused from regular spelling activities.

It is not unusual for an able learner to be a careless speller; in his haste to record his thoughts, he cannot wait for correct spelling. For this reason, he must be taught to proofread his own writing. Words he has heard, but possibly never seen, he should attempt phonetically to the point where he can find the correct spelling in the dictionary.

The New Intermediate Manual suggests many interesting activities for the capable speller. The following are additional suggestions:

Maintain a bulletin board list of difficult words in social studies, science or another area of the curriculum.

Play a rhyming game based on a specific word, making one list of words that rhyme with the same spelling and another list with different spelling. (Words requiring rhyming of two or three syllables are harder.)

A REPORTER IS WELL-FORTIFIED WITH DOCUMENTED EVIDENCE

Handwriting. - Speed of thought often makes handwriting a laborious task for the able child. Rather than set perfection as the goal, the teacher should insist on legibility, neatness, avoidance of idiosyncrasies, and equal facility with the pen and pencil.

Typing. - Although facilities for typing are not available in the elementary school, the able child who types accurately and has a typewriter available, may use his ability to type material for a class newspaper, the contents page of a booklet of class stories, special notices for the bulletin board, or in any similar instance.

Writing for Practical Purposes

Letter Writing. - The able child should become adept at all forms of correspondence. He should learn to adapt his writing to his purposes and the interests of the reader. He may -

Serve as corresponding secretary for a class or club group.

Write business letters requesting information or materials for the class.

Write travel letters to the class when he takes a trip.

Newspaper Writing. - The able child will find that a class or school newspaper furnishes many areas for the development of writing skill. It offers the child the following opportunities:

Write questionnaires for interviews.

Report facts in a news story; interpret them and apply them to his school situation in editorials.

Write a special column.

Write advertisements.

Organize factual local, national, and international news.

Edit the paper.

Other Activities. - Other practical writing experiences the able child may have are the following:

Act as class or recording secretary; record and write up minutes of a meeting.

Compose slogans, captions, and legends.

Write a booklet of the school's rules and opportunities for new pupils.

Creative Expression in Poetry and Prose

Because of the richness of his interests, experiences, and imagination, the capable child usually derives great satisfaction from his creative efforts in writing. A literary club might foster these interests. Able children enjoy getting books on the standards of publishers and trying to meet these standards. They may even send some of their work to children's magazines for publication. It is advisable for them to keep folders or booklets of their work so they can see their progress.

Poetry. - The poetry of able children reflects maturity of concept, mood, and feeling. They can adapt to various types of verse, such as the narrative poem, lyrics for original songs, limericks. The following poems are illustrative of their work.

Something

Something can be anything,
Land or sky, sand or sea,
Us or them, you or me.

Whenever you want it,
It's up to you,
It'll do what you want it to do.

Something is something,
Whatever it is,
Just make it something
And that's what it 'tis.

-- Robert, Grade 4

My Stars

Stars are the dewdrops
That fall upon the petals of the night.
They are an inspirational light
For those who are alone in the world.
They delight the eyes of the orphan,
Their light wipes away the tear of a widow,
Their bodies bring strokes to the artists' brushes,
They are flowering birds in the field of darkness,
Some white sheep in flocks of black.
They are my inner feeling of security --
My many stars shining in the deep, mysterious,
Darkness of the night.

-- Judy, Grade 5

Santa Saves Christmas

T'was the night before Christmas and high in the sky
A green flying saucer slipped silently by.
If one had the fortune to peer through its side
He'd see seven reasons to run off and hide.
For seven green martians had chosen this night
To come to the earth and not to do right.
But the night they had chosen to land here from space
Made their orbit cross paths with a white whiskered face.
His space ship was open - His motors were queer
In fact, t'was a sleigh and eight tiny reindeer.
Though the sleigh was old fashioned and made out of wood,
This spaceman's big difference - He was out to do <u>good</u>.
The ship and the sleigh at the same time sat
On the roof of a ranch house, by good luck flat.
The seven green martians with space guns in hand
Surrounded poor Santa and his gay antlered band.
They threatened to snatch him far off into space
A sad blow for Christmas and the whole human race.
But Santa's bright eyes read their minds at a glance
With magical quickness he froze them in trance.
He then did his best to help them do right
To take some rare gifts and be off in the night.
But when it was plain they would never know pity
He used more white magic to save town and city.
With his shriveling glance he made them grow small,
Until these weird creatures were two inches tall.
He then scooped them up, put them deep in his pack,
And descended the chimney with the pack on his back.
And the boy who found spacemen 'neath his Christmas tree,
Might never imagine their grim history
Unless he should look outside on the roof
And see the green space ship by the print of the hoof.

-- David, Grade 5

The following prayer reflects how an able child identified through verse with the feelings of the pioneers as they prepared to travel the Oregon Trail.

Prayer

Dear Lord, protect us on the coming journey,
Give strength to the weak, courage to the faint-hearted,
Bless the sky with sunlight, and may the sunlight shine
through to the brave hearts of the pioneers.
Our Lord, bestow on us fortitude to face the obstacles
of the Trail.
Bless the people with good health and courage -
Courage to found and maintain the land of Oregon for
the United States of America.
Oh, Lord of Glory, give peace and firmness of mind to
these people and the people in the decades to come;
For these strong-hearted people wish to explore and see
the wonders of Thy land.
Lord, give us faith. Amen.

-- Judy, Grade 5

Short Stories. - Many children like to write short stories, but the able child should understand the elements of his story which include setting, development of plot, characterization, climax, and conclusion. This often comes about through the teacher's personal guidance of the child. For example, as baseball season approached, the teacher and several boys were discussing tryouts for a knothole team. Jim expressed concern about making the team, for Bill had told him he did not have enough drive and needed to improve his hitting. The teacher suggested that, given the proper elements, this could be developed into a story. The following story resulted.

The Beautiful Day

It was a beautiful, warm day in April. The flowers were beginning to bloom, the sun was shining, and the birds were singing. It was the kind of a day that makes everyone feel happy.

Jimmy could not appreciate the weather as he had a very heavy heart on this special morning. The knothole teams were being chosen today and he felt very sure that he would not be put on any team.

He ate his breakfast in silence. His mother, knowing why he was disturbed, said very little to him. As he picked up his mitt and his baseball shoes to leave for the field, she called out, "Good luck, son, just do your best and I'll be thinking about you."

As Jim neared the field he could hear the shouts of the boys and his heart began to beat faster. He knew that if he didn't do well at the plate, his chances were lost. His hitting had been very poor in the past practice sessions and he knew that this was his last chance to prove that he could hit.

In a few minutes, they were playing ball and soon it was Jim's turn up to bat. As he stood there, the bat held tightly in his trembling hands, he prayed silently. The first pitch was a ball; the second, he struck at and missed; the third pitch was another ball, and then came the most important ball in his life. As the ball came toward him, he heard his mother's voice saying, "Do your best, son," and the ball went sailing over the fence. A home run, and a beauty! The Coach came over to Jim and said, "Jim, that was the best hit ball I've seen so far this season. I didn't think you could do it! Congratulations! I was in doubt about you until today, but now I believe we can use you on our team!"

Jim almost flew home because he could hardly wait to tell his mother. As he approached his house he saw her in the yard and called, "Mom! I made it," and as he spoke he noticed for the first time what a beautiful day it was.

-- Jim, Grade 5

Diaries. - The diary offers a writing outlet for the capable child. It may be a personal diary, or one of a literary or historical character; e.g., Alice from "Alice in Wonderland," or a flatboatman on the Ohio.

Script for Plays. - The able child can write script for the class play, television performance, radio drama, or a puppet play.

Other Prose. - The creative writing of an able child often reflects depth of understanding of people and their problems. The following illustration shows how a fifth-grader perceives the life of a cowboy.

A Cowboy's Life

A cowboy's life is not full of glamour and shooting villains and rescuing pretty girls. Rather, it is full of work and when the day's work is over, it is full of fun.

A cowboy must be a doctor for sick cows and horses and a carpenter for broken-down corrals and fences. He must have a sense of humor and not blow his top when somebody plays a prank on him.

When it is time to brand the calves, he first brands them, then takes off their horns and finally gives them an inoculation to ward off black leg and pink eye.

When he takes the cattle up to the mountain pastures to graze, his work is comparatively easy. He seems to be captivated by the beauty and splendor of the mountains and is quiet and thoughtful while in the heights.

Another job of the cowboy is harvesting hay which, even with modern tools and machinery is not easy, as any cowboy will tell you.

When he finally sees the cattle go to market, he thinks of all the trouble and toil they have cost him; yet they have given him his life's work. So, he settles down for a long, cold winter.

So you see, a cowboy's life is not full of glamour and shooting villains and rescuing pretty girls.

-- Dick, Grade 5

An able child often can project himself into the role of another person and write from that point of view in the first person. The following letter was written by a fifth-grade girl who assumed the role of an adult on the Oregon Trail in 1843.

Fort Laramie
Oregon Trail
June 4, 1843

Dear Mom and Dad,

Although I am very weary, I am very thankful to be able to write you this letter. The trail is most tiring, just the trail, the oxen, the wagon, and the almost tireless pioneers for company. Although the plains and the mountains are gorgeously colored, they can become very discouraging after going mile after mile, day after day, week after week, over what seems the same ground.

The campfire in the nighttime is heartening, though. As the children dance around the fire and the parents indulge in serious conversation about the trail, the moon shines down, and secretly shines in our hearts. The shining feeling is hope; hope for the Willamette Valley, hope for our children when they grow up in the fertile land of Oregon.

I, myself, have been faring pretty well. In as much as my husband is down with a cold, and that I lost my beloved trunk in the Kaw (Kansas River), we have suffered no worse than the other brave pioneers traveling at our side. We are all resting up here at Fort Laramie, and we hope to write you soon - from Oregon.

Lovingly yours,

Emma

ORIGINAL BOOKS SUPPLEMENT THE CLASSROOM LIBRARY

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CHAPTER V. READING

Books do much to free the able learner from the pace set by the rest of the class and at the same time, offer him something of interest to share with his classmates. Most able learners read fluently when they enter the fourth grade, but need planned and guided learning situations to acquire depth of understanding through the development of advanced reading skills and techniques. Guidance need not always be extensive; often a query or comment by the teacher will suggest deeper interpretation or new sources of information. Advanced skills should be developed as the child indicates readiness for them. No limitations should be placed on what a child reads, except that selections read should not be beyond the maturity level of the child.

The pattern of reading among able learners varies widely and some potentially able readers may be reading below expectancy. The teacher, with help from the child, should determine the range of reading interests and the present level of achievement in reading skills. From such cooperative analysis will emerge plans for activities to promote growth in reading skills and deepen interpretation and appreciation. The following suggested activities are particularly applicable to the child who already is a fluent reader.

Vocabulary

Wide reading contributes to growth in vocabulary. Able children, however, should consciously note precise meanings of the words they add to their vocabulary and become increasingly able in structural analysis. Some activities follow.

Keep a list of interesting words or phrases noted in reading.

Make lists of synonyms, antonyms, or homonyms.

Compile and display for class use a list of colorful words.

Construct crossword puzzle games which utilize vocabulary.

Match the correct meanings of a word to several sentences illustrating its various meanings; prepare such exercises for classmates.

Choose for use in supplied context the word which most nearly expresses the mood or meaning.

Identify the meaning of prefixes and suffixes; build lists using them.

Discover rules that govern the accented syllable; note changes in syllabication with addition of prefixes.

Study word derivations; find the roots; study relationships of derivatives from a foreign root word; e.g., general, generous, psychogenetic, congenital, generation, genius, and genus.

Interpretation

Predicting the Outcome

Predict what will happen in the next week's installment of a weekly magazine.

Read the first part of a story such as Legend of Sleepy Hollow, and predict the outcome; find reasons in the story for the predictions and check against the complete story.

Collect and read published material on a current problem, such as "Control of the Suez Canal"; analyze and predict the outcome; check the prediction against the actual solution.

Collect pictures and published evaluations of current airplane and automobile models; follow reports on laboratory and field testing; predict which will be successful and which will change its design.

Detecting Propaganda

Make a study of the speeches and written work of a particular public figure; determine his motives and find hidden motives, if any; list any clues which indicate the author's real beliefs.

Recognize words or biased terms which indicate prejudice.

Compare newspapers on presidential issues; check with facts, if possible.

Analyzing Characters

Describe a character in a story; tell ways in which the author developed the character and influenced the sentiments of the reader.

Compare characters like Long John Silver and Blackbeard.

Distinguishing Between Fact and Fiction

View a television program; check facts presented in literature with those on program.

Read several books about one man or historical event; note any discrepancies in facts; check accuracy.

Read about a particular area; check facts with present status of the area noting changes caused by recent political and social events.

Analyze the point of view of an author in a particular book; read about the author to explain it.

Promoting Good Human Relations Through Literature

Attempt to understand the behavior of characters in a book by analyzing possible causes.

Discuss choices made by characters and think through possible alternatives.

Solving Personal and Social Problems Through Reading

Read biographies to learn how famous people have solved problems and how this has contributed to their success.

Interpret the way a character in a popular book solved a personal or social problem; compare interpretation with others who have read the book; add other solutions and explore the relative merits of each.

Interpreting Subtle Meanings

Locate and discuss the meaning of such phrases as "Before the second morning, his tormenting thirst was all he could think of. The endless lapping of the salt waves drove the agony deeper and deeper into his brain like blows from a hammer."

Compile a list of phrases with subtle meanings and present them to the class in the form of a "What Does It Mean" game.

Research

Research projects of the able child often reveal a need for advanced skills. For example: An able fifth grader interested in floods and flood control went to the public library and learned to use the card file in the periodical room. He took notes on flood accounts found in past Cincinnati newspaper articles. Then he studied several methods of flood control found in encyclopedias. Finally, he

wrote to one of Cincinnati's Congressmen asking for plans being developed in recent legislation. From the Department of Interior he got a plan of the Ohio River locks and dam system and channel. He studied maps and atlases, river charts and graphs of money spent on floods control and damage done by flood. This information he finally outlined and illustrated for a class report.

Among the activities the able learner should engage in for skills development and to satisfy his reading needs are the following:

Use the card catalogue at the public library.

Take notes and organize them into one report.

Outline information from a combined use of many sources.

Prepare a bibliography.

Recreatory Reading

The able child derives much pleasure and satisfaction from the pursuit of personal reading. It provides him with many new vicarious experiences and much new information, as well as the opportunity to develop a vivid imagination. For the able child, literature is often a source of great emotional satisfaction; it offers him guidance as he pursues a personal interest; it leads him into new fields. No other media offers as much.

As he reads, the able child can interpret what he reads; he is aware of the qualities the author intended the story to have. He recognizes the symbolism in The Secret Garden, the autobiographical quality of Little Women, and the prophetic aspects of science fiction like Twenty Thousand Leagues Under the Sea. He understands the historical background of certain biographies like Joan of Arc; he experiences the feelings a story is intended to convey like the reaction of a child to adult rules, actions, and mannerisms as shown in Alice in Wonderland.

It is the responsibility of the teacher to know the able child's potentialities and help him find appropriate books. Occasionally, an able child seems to

prefer books of mediocre quality which lend themselves to rapid reading. Careful observation of his reading selections also may reveal a concentration on only one type of literature. Although the final selection of material for recreatory reading is the child's, the teacher should encourage him to read many types of literature and help him select challenging books of high quality. She may enlist the assistance of the librarian and the child's parents in this task, but it often is necessary for her to make them aware of the child's ability.

Recreatory reading may contribute to both growth of the individual and the group through any of the following activities:

Report on the works and style of a favorite author.

Become an authority on the life of a famous person through reading biographies.

Write a book review for a school paper or magazine.

Adapt a story or event for dramatic production; give leadership in planning, organizing, and directing such a production.

Keep an annotated file of books read and use it to help other children select books.

Keep a reading profile to insure a wide range of reading.

Arrange displays for book fairs, for parents and for other classes in the school.

Compile an annotated bibliography of books in various classifications or on some topic of class interest.

Make collections of myths and legends.

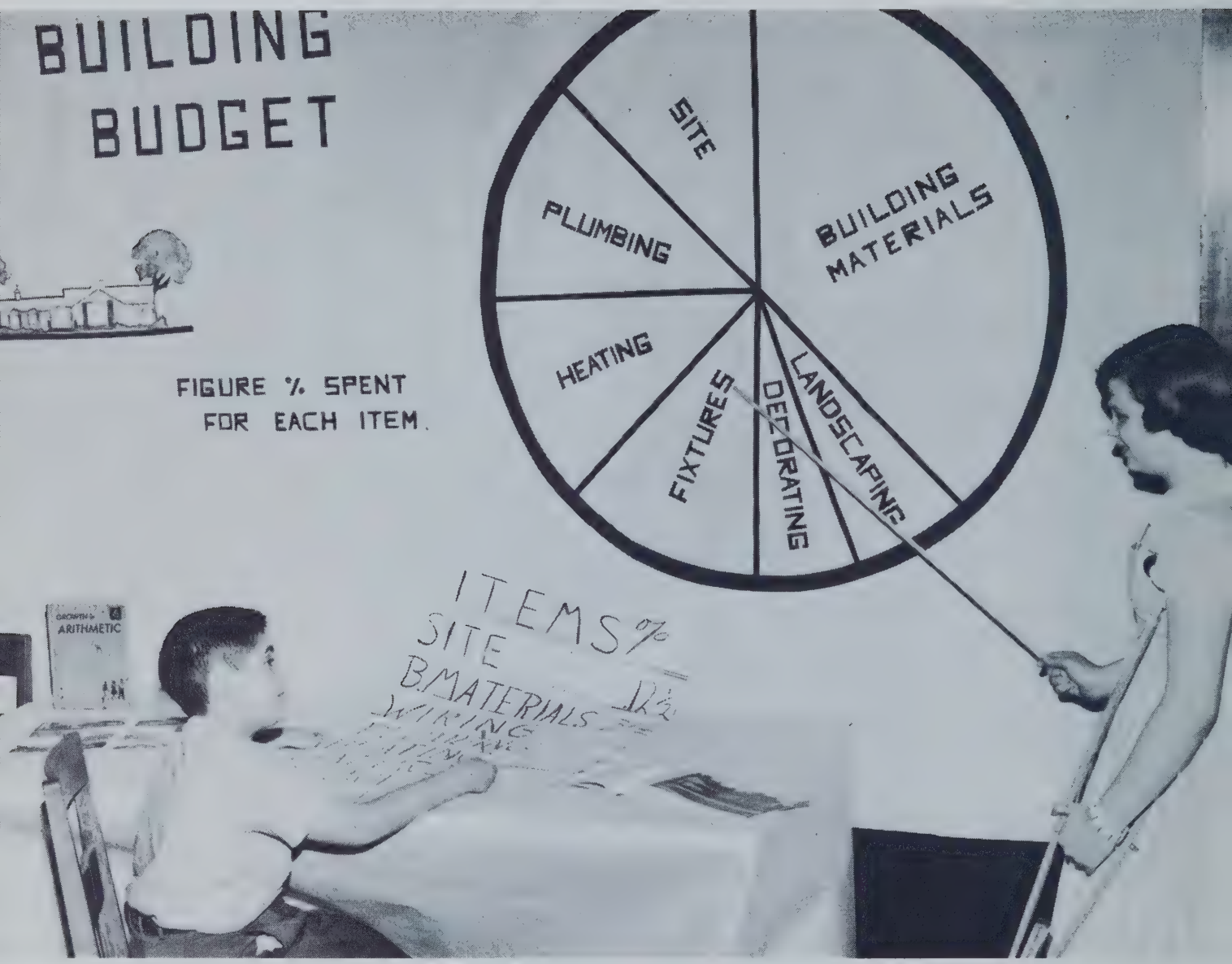
Dramatize a characterization of a famous character.

Arrange for audio-visual presentations of famous stories.

Study the differences in style, vocabulary, etc., of different literary periods or different writers.

Participate on an advanced level in dramatic clubs, poetry clubs, literary clubs, and book fairs.

Acquire a personal library.



VISUAL REPRESENTATION CLARIFIES ADVANCED MATHEMATICAL CONCEPTS

CHAPTER VI. ARITHMETIC

Not infrequently an able child fails to do outstanding work in arithmetic either because his interests have been channeled in other directions or because his facility for learning creates a verbalism which is mistaken for mastery. He needs deep insight into the structure of the number system so that he will apply skill in computation and problem-solving to all mathematical situations. He should achieve a high degree of competency more rapidly than the average child and, if his interest is stimulated, should be able to solve more difficult and complex problems. Although an able child dislikes the tedium of drill, he needs a sufficient amount of practice to assure automatic response. He should, however, realize the purpose of such activity. To understand and enjoy current publications, he should have an understanding of mathematical concepts and the vocabulary relating to them. As he grows in self-confidence and self-reliance, he should gain satisfaction from estimating answers and solving problems mentally. The following suggested experiences offer the able child an opportunity to develop mastery of skills and an understanding of concepts.

Estimation and Mental Arithmetic

As he grows toward mastery of mathematical skills, the able child needs many opportunities to estimate answers and solve problems mentally so that he will apply these techniques automatically to every problem-solving situation.

Estimate answers to all problems and compare computed answer with the estimated one.

Round large whole numbers to nearest tens, hundreds, thousands, and the like.

Estimate answers with mixed numbers by computing with the whole numbers involved and determining about how much more the real answer will be.

Estimate the size of certain play areas. Check estimation by accurate measurement.

Estimate the weight of packages to be mailed and the cost of mailing; check by weighing the packages and investigating and explaining the postal zones.

Solve problems mentally by breaking numbers up into tens, hundreds, thousands, and the like.

Ex:	16 x 380			or			
Think:	10 x 380	=	3800		Think:	16 x 400	= 6400
	6 x 300	=	1800			16 x 20	= 320
	6 x 80	=	480			6400 - 320	= 6080
	3800 + 2200	=	6000				
	6000 + 80	=	6080				

Use accepted short-cut methods to solve problems mentally; e.g., to multiply by 25, multiply by 100 by adding two zeros and divide by 4.

Devise personal, accurate short-cut methods to problem-solving.

Advanced Computation and Processes

The following proposed step-up in arithmetic is suggested as appropriate for able children who have shown insight into mathematics and early facility with processes. No able child should be restrained if he has the interest and ability to go farther; he should be stimulated to go as far as he can each year. A record of the work accomplished which is advanced for the grade should be available in the child's cumulative record. A suggested step-up for each grade level follows:

Grade Four

Understand, read, and write large numbers as the need arises.

Multiply with a three-place multiplier.

Work with two-place divisors in long division, using carrying and remainders.

Grade Five

Multiply and divide common fractions and mixed numbers.

Work problems requiring the addition and subtraction of decimal fractions to ten thousandths.

Learn to read decimal fractions to ten thousandths, understanding the relationship involved in place value.

Grade Six

Work with problems involving the three kinds of percent problems: compute the percent of a number, compute the percent one number is of another, and compute 100% of a number when a given percent is known.

Demonstrate the relationship among fractions, decimals, and percent, working the three kinds of problems in two ways - first with percent and then with fractions.

Learn to make a circle graph.

Measures and Money

The able child is able to use skill in the use of measures and money to both his own advantage and the advantage of the class. The following experiences are suggested:

Spend a stated amount of money for Christmas shopping and do comparative shopping to determine the wisest way to derive greatest value. Include sales tax and, when imposed, federal excise tax in the computation involved.

Keep a cash book showing pupil's allowance or money earned, his expenditures, and the balance on hand at the beginning of each week.

Compute the cost of buying and stocking an aquarium or purchasing other equipment for the room.

Compute the average cost of feeding and housing pets in the school room or at home.

Compute the expense involved in taking the class, or certain individuals, to camp for a week.

Investigate and report on the cost of sending books and other packages via United States mail according to various classes of mail.

Investigate how the amount of linoleum or carpeting for a room is determined and how the cost is computed.

Find out the lengths of time and the amount of money needed to take trips to various places in the United States by different means of transportation.

Investigate and report on possible recreational activities available for a designated amount of money for the entire class or for any number of individuals.

Assume full responsibility for the collection and redemption of sales tax stamps. This includes computing the amount to be refunded, filling out the necessary forms for the state, and mailing the stamps.

Scale Drawing, Models, Charts and Graphs

The able child has many occasions to organize and present information in the form of a graph or chart. He often needs to construct a model or make a scale drawing to interpret information or communicate his thinking to others. The following experiences offer him an opportunity to develop skill in the use of these techniques.

Construct a scale model of a football or a baseball field showing distances involved.

Map a scale drawing of an airport showing runways and approaches.

Draw a plan for a living room, gymnasium, or classroom.

Make a chart showing weights, heights, and ages of children in the class; make generalizations.

Make charts or graphs to show the increase in the population and the shift of centers of population.

Make charts or graphs showing the increase in postal rates through the years and the increase in the quantity of mail handled, the increase in the number of postal officials needed, the cost of maintaining this service, and the proposed changes which are under consideration by the government.

Make a graph showing the results of a sales tax stamp drive or paper drive conducted by the school.

Games and Puzzles

Challenging games and puzzles tax the mental powers of the able child and offer him an intriguing way to spend free time. The following are suggested:

Construct games for classroom use.

Make up a puzzle file from puzzles cut from magazines.

Read stories and solve puzzles in Enrichment Program for Arithmetic by Harold D. Larsen.[1]

[1]Harold D. Larsen, Enrichment Program for Arithmetic. A series of eight pamphlets on each grade level. Evanston, Illinois: Row Peterson, 1956.

Miscellaneous Experiences

The able child has many experiences which involve the use and development of general mathematical skills rather than the skills related to a specific unit. The following are such experiences:

Collect illustrations or advertisements from newspapers and magazines for the bulletin board, centering the display around a different mathematical concept from time to time.

Construct circles and divide them into fractional parts of a day (24 hours) to show the time and fractional part spent sleeping, eating, playing, studying, and the like.

Locate sources for obtaining data concerning the United States census; list interesting facts gleaned from this. Arrange principal cities in the United States in order of size.

Make charts showing the time zones in the United States or in the world and discuss their effects on travelers. Discuss effect of International Date Line on time.

Display and discuss maps showing the rainfall in the United States, Africa, Asia, and other places. Make comparisons and draw conclusions.

Compare the length of time needed to cross a continent, an ocean, or circle the globe today, with that required at various time in the past by various means of transportation.

Read and explain railroad, bus, and air time tables. Plan imaginary trips showing connections and stop-overs.

Make original time-distance problems concerning jets or submarines.

Make a weather thermometer showing degrees, boiling and freezing points. Compare with a clinical thermometer with its gradation into tenths of degrees.

Construct bird houses or kites using accurate measurements.

Keep baseball chart showing weights, heights, batting averages of players, and number and percent of games won and lost by the team.

Organize a group to present original dramatizations showing the use of arithmetic in real life situations.

Do research to discover the meaning and significance of "time" words or abbreviations used in mathematics. A.D., B.C., century, calendar, decade, score, etc.

Do research to find out the characteristics of geometric figures. Make models for a display.

Learn to use the protractor.

Use an adding machine.

Compute the percent of discount offered by stores offering 1/2 or 1/3 off.

Explain the difference between net and gross cost; between net and gross income.

Projects

The ability of the able child to apply mathematical skills and concepts to real life situations reveals true evidence of mastery. Projects, such as the following, not only offer the child an opportunity to apply what he has learned, but often lead to new understandings and an extension of skills.

Study the history of our number system as recommended for able learners in the New Intermediate Manual.

Study home ownership.

Collect newspaper clippings of real estate advertisements; use actual prices to set up problem.

List items necessary in home maintenance. Calculate expense over a three-year period and average yearly cost.

Make pictures or models of the exterior and a floor plan for home use, showing parts which need to be kept in repair, or redecorated.

Make a chart showing the advantages and disadvantages of home ownership.

Decide whether one would be better off to own or rent a home. Include such factors as the interest on a mortgage and cost of maintenance, contrasted with amount of rent one would pay for the same type of housing. Take into consideration interest income if the same amount of capital were invested in securities.

Contribute to a special class project as illustrated by the following Mother's Day project.

When a class decided to make candy for their mothers for Mother's Day, an able child offered the following recipe:

$1\frac{1}{2}$ c. confectioner's sugar ($\frac{1}{2}$ pound)
White of one egg
3 T. margarine ($\frac{1}{2}$ stick)
Vanilla to taste
Recipe makes 15 balls, one inch in diameter.

The class decided that each of them would need about 30 pieces. Based on this, a small group of able children computed the total quantity of each ingredient needed, investigated the cost per unit, and computed the total expense involved. They submitted the following to the class:

Sugar	34 boxes (1 lb. each)	@ $ .15	$ 5.10
Margarine	8½ lbs.	@ .35	2.98
Eggs	6 doz.	@ .55	3.30
Waxed Paper		@ .30	.30
			$11.68

The class decided that each child should bring thirty-five cents. Under the guidance of the able child, ingredients were purchased and the candy made.

Another able youngster calculated the necessary size of a box to contain the 30 pieces of candy, and decided the minimum size would be thirty cubic inches. Allowing room for packing, she made plans for a box 5½" x 3½" x 2½", constructed a sample, and explained the procedure to the rest of the class.

UNIVERSITY OF ILLINOIS
LIBRARY

A COMMITTEE DISCUSSES A PROBLEM IN SOCIAL STUDIES

CHAPTER VII. SOCIAL STUDIES

The able learner in the classroom studies, in general, the same social studies topics as all children in the Cincinnati system, but his learnings can be greatly enriched. He should have the advantage of many additional enriching experiences. The large concepts which make up the content goals of the program will emerge more quickly. He also moves at an accelerated rate toward the process goals, such as research skills. These goals are the means by which the content goals of the program are achieved. As concepts are formulated, the able child acquires a deeper understanding of some of the political, economic, and social aspects of the American way of life.

Within each unit, unique opportunities for enrichment exist. Since these differ from school to school and time to time, the teacher should be aware of resources which exist in her particular area and should make it possible for the able learner to take advantage of opportunities as they arise. Many enrichment experiences, such as writing and enacting plays or writing letters seeking information, can be adapted for use with various units or may suggest other appropriate activities. Fortunately, the average child also may enjoy and participate in some of the experiences, but the able child can develop them earlier and more fully.

It is hoped from the activities suggested here, the teacher will gain inspiration and insight into ways of working with the able child in the field of social studies. The able children in each class undoubtedly will have many challenging experiences not mentioned here. It is suggested that the teacher and children select the activities that will make the greatest contribution to growth. The teacher should use her own resourcefulness to guide the able child through any experience she feels will help him grow.

General Enrichment Activities

Often enrichment experiences are guided by a special interest of the child, but it is also the responsibility of the teacher to make suggestions which will open up new areas of interest. Within the school year, the able child needs a variety of experiences. The following activities are appropriate for various units.

Do research work.

- Locating material in books and making bibliography with page numbers for less able.
- Collecting data on a particular problem from many sources and critically evaluating it.

Become an authority on a topic of personal interest.

Organize and present information and comments on world, national, and local problems and events.

Correspond for needed materials.

Assume the responsibility for a bulletin board display of news articles about a particular topic.

Classify materials for use.

Become adept as a chairman, reporter, or evaluator for a group.

Summarize and evaluate activities.

Secure additional information from sources requiring advanced reading skills.

Make an elevation map to scale.

Make models; e.g., a flatboat to scale; the Ohio River system of locks and dams; a complete Virginia plantation; a medieval castle or medieval weapons. These models should be accurate in every detail.

Give illustrated travel talks.

Write, produce, and direct a radio program.

Make a doll and design and sew authentic native costumes for it.

Do research on a difficult topic of interest to the class and report the findings in such a way that the less able children will understand them.

Grade Four

The Program and the Able Child

The fourth grade program of social studies is concerned with ways of living in contrasting geographic regions of the world. To the able learner it offers many and varied enrichment experiences through which he acquires early in the intermediate grades a deep knowledge and understanding of people and their problems.

The able child reveals evidence of concept formation earlier than other children. He understands the implications of the ways of living in various types of places and recognizes ways in which people are alike and why they are different. He realizes that our world is changing and that it will continue to change. He perceives the extent to which men and nations are dependent upon each other. He recognizes the need for a wise use of natural and human resources. With additional experiences, these concepts are strengthened.

As he works to acquire knowledge, he grows beyond the average youngster in his ability to locate and use materials. He not only collects data from many sources, but critically evaluates it. From his data he draws conclusions, but is aware of the danger of doing so from inadequate or invalid data. He is a challenging thinker, capable of organizing and expressing his own views either orally or in written form.

The Far North

Activities carried on by able children in relation to a unit on "The Far North" are described below:

> The group in which Bruce was working needed up-to-date information on road conditions in Alaska. He reasoned that since Alaska is a territory of the United States, such information should be forthcoming from the government. It was necessary for the teacher to procure for him the exact address and to teach him the form of a business letter which he proceeded to compose.

Steve, interested in the statehood of Alaska, went deeply into the way in which a territory may become a state and studied in detail the Ordinance of 1787.

After the class had heard the teacher read Barney Hits the Trail,[1] Ken inspired his class to write letters to children in Unalakleet, Alaska. Before the letters were mailed, he went to the Post Office and checked postal rates via regular mail and via air mail. He also checked the relative time each would require and recommended air mail. Because of the expense involved, he also recommended that each child make his letter as light as possible by using a light-weight paper. The children's faith in him was reaffirmed when answers arrived before the letters would have reached Alaska via regular mail.

Jim challenged a statement he heard in a film in which an Eskimo remarked, "If the animals left the Far North, we surely would die." He and a group worked on the problem. Under his leadership, they analyzed ways in which the needs of the Eskimos are met by animal products and suggested other means of meeting the same needs. Research included articles from newspapers (zippered parkas and plastic igloos), Natural History Magazine article on principle of the capture of air, regular textbooks, supplementary books, National Geographic Magazine, Life Magazine, and the encyclopedia.

One able child arranged for his father, who had been north of the Arctic Circle, to talk to the class, while David made a detailed study of the actual and potential mineral wealth of Alaska. Louise arranged for her aunt, who had written a book about seals, to talk to the intermediate grades of the school.

Grade Five

The Program and the Able Child

The fifth grade program of social studies consists of a study of life in various regions of the United States, today and yesterday. Through this program, the able child should acquire a clear understanding of our national heritage and the basic contribution of the makers of our country. Far more than the average, the able child should learn of the growth of principles and beliefs which are expressed in the Declaration of Independence and the Constitution, and of the factors which contributed to the discovery, settlement, growth, and development of our country. Learning to know Cincinnati, past and present, will contribute to greater understanding of the United States.

[1]Sara and Fred Machetanz, Barney Hits the Trail. New York: Charles Scribner and Sons, 1950.

A COMMITTEE CHAIRMAN KEEPS CAREFUL RECORDS

Cincinnati

Challenging activities carried out by able children in connection with their study of Cincinnati are described below:

Tim studied the causes of early deaths in pioneer days as indicated on gravestones in the pioneer cemetery. He compared them with causes today and explained the difference.

Larry visited Turkey Bottoms (the level land along the river in the vicinity of Lunken Airport) and wrote a description of the area as it would have looked in 1800.

As each child wrote his own Cincinnati story, Charles did much more in the way of research. He served the group as proof-reader and fact-checker.

A large individual chart was the means chosen by one able youngster to show the relationships of Cincinnati history with other happenings in America and Europe at the same time.

Jane collected folklore from outside resources for her class when it was studying pioneer trails through Kentucky, "The Dark and Bloody Land," while Karen compared the responsibilities of a present-day family with one in pioneer times.

A marionette play depicting the history of early settlements was written and produced by an able child who was able to develop better than the average fifth grader, accurate costumes, detailed scenery, and continuity.

A group of able children made a large city map from wrapping paper and poster paint showing all suburbs, outstanding civic and business buildings, major church buildings, major highways, all villages, exempted villages, and other communities in the Greater Cincinnati area.

Joe, interested in business, studied business trends. He reached conclusions about why certain businesses locate here and others leave this area. He studied the available markets for products. He reasoned why some Cincinnati businesses are among the nation's top fifty.

A group of children found it interesting to write tall stories; e.g., "How the Ohio River Got So Many Curves." Some may find it challenging to write an actual scientific explanation of this.

In one school, an able youngster wrote an early history of his community. He located the oldest residents, arranged interviews, and compiled the information and illustrated it.

In seeking an answer to "What is Cincinnati planning to do about its transportation problems?" an able child reported on the transportation system of the Master Plan.

An interest in baseball prompted John to study the growth and problems of the Cincinnati Redlegs.

Grade Six

The Program and the Able Child

The sixth grade program of social studies seeks to develop an understanding of the origin and development of civilization in Europe and the Middle East and of life in these areas today. For the able child, the scope of this program offers many challenging new experiences from which previously formed concepts will be strengthened and new ones will emerge. The able child should realize more fully the way in which democratic practices and ideals have evolved through time and should develop a true appreciation of our social institutions and their evolution. As he grows in knowledge and understanding of the past, he is better able to interpret current happenings in the world and to make predictions for the future. The following solution to Germany's present day problems as proposed by an able child, reflects not only deep insight into the problems of the German people, but also a great belief in democratic government.

My Plan for Future Germany

The present Germany is almost in chaos. The eastern German land has the farming land. The western German lands have the resources. Even if Germany was united now, it could not feed itself as well as before. The rich German farming lands that produced a surplus before the World Wars have been divided among the surrounding countries. This was true because the farmland is located on the borders and, after losing the First World War, some of the border lands were taken away. After losing the Second World War, more lands were taken away and Germany was divided. One side of Germany is leaning on other countries for their source of the resources the other side has. People cannot go on like this. If the controlling nations don't do something, Germany will.

My plan for the reunification of Germany is simple and the plans should be carried out under the watchfulness of the controlling nations. The first step is to unite Germany under one type of government selected by the people of Germany in a free election. The people then would have a government that is liked by the majority of the people. The next thing would be to standardize all things needed. This would draw the zones closer together in relations. To bring Germany dependent on itself, the vital farm lands lost during the World Wars should be returned. This would help the farmers produce food abundant enough to feed the people. The first few years of Germany's new life, it should be helped along by the main powers to prevent mistakes which may lead to a war.

-- David, Grade 6

England

Activities engaged in by able children in connection with the class study of England, which are typical of those an able sixth-grader can carry on in connection with all units, are described below:

Dick compared England today with two hundred years ago. He identifield many problems of England today and traced their sources.

Allen made a time line for the development of democratic documents since 1066.

A map of the Eastern Hemisphere became the project of an able child who showed clearly the significant location of England and pointed out the tremendous advantage of its early isolation away from the center of civilization and its later location in the heart of civilization. She made a study of the early advantages of the location and later advantages and disadvantages.

Tom made an earth model of villages of painted savages who lived in round huts. He then traced the relationship of these savages to the Celts of northern Europe.

After preparing a report on literature and writers, a sixth grade girl developed an interest in Shakespeare and built a model of a Shakespearean theater. She peopled her stage with characters from The Merry Wives of Windsor.

Andy drew an invasion map showing the route of the Roman invasion and occupation during approximately four centuries. He traced with charts the Roman influence on English life and heritage. Other able children in the group made costumes, models, had impromptu plays, and composed word lists which showed the Roman influence.

A study of the chaos following the fall of Rome proved interesting to another able child. She compared the fate of the victims of Roman conquest in England with other colonials in other lands and times. Another group organized a panel discussion and compared the Roman Empire with the British Empire.

One group wrote and enacted short plays showing the invasion by Picts, Scots, Anglo-Saxons, Jutes, Danes, and Normans, and the relationship which existed among all conquering tribes.

A series of "You Are There" programs resulted from a group's tracing of the development of the English form of government beginning with the Magna Carta, Bill of Rights, and Petition of Rights. A study was made of trial by jury. The programs were taped with sound effects.

A group of able children made a study of men who established and fostered the representative form of government, judicial system, inalienable rights of individuals, social equality, and fundamental freedoms. They drew portraits of these men in costumes of the times, and planned a guessing game in the form of "Who Am I," giving clues in rhyme.

Another group wrote imaginary stories showing the hardships that resulted from the development of England from an agricultural country to a highly industrial country, and the terrible conditions that accompanied the movement from farm to factory. These were written in serial form and presented to the class.

The industrial revolution proved challenging for an able boy. He made a chart showing the date of the revolution in different countries, the degree of industrialization, and the related present-day strength of the country.

Norman made a study of the city of London. He wrote for tourists maps and sight-seeing pamphlets and proceeded to plan a trip through the city. He did much research to discover reasons for sites, historical buildings, monuments, and so forth. At the same time, Mary made an illustrated notebook tracing the rulers of England. She made charts to show changes in government.

David, interested in coins, made a study and collection of English money, its evolution, rate of exchange, and the banking system. He arranged for a coin collector to talk to the class.

Enrichment Activities in the Field of Citizenship

Throughout the intermediate grades, emphasis is placed on the development of citizenship. There are many ways in which an able child may contribute to both his school and community, thus becoming a participating young citizen.

Operate Lost and Found Center.
- Planning exhibits of lost articles for children and P.T.A. meetings
- Writing notes to children and classes about lost articles
- Making posters and jingles to create an interest in possessions
- Visiting department store to price the cost of lost articles to make school conscious of the use of thrift in taking care of clothing
- Carrying on school campaign to persuade children to put names on possessions
- Giving parades and plays to advertise lost articles

Operate Savings Stamp Campaign.
- Charting how many stamps are bought each week and drawing comparisons
- Making up mottos and slogans to encourage sale of more stamps

Operate auditorium sessions to take care of surplus children in playrooms.
- Organizing activities such as reading stories, telling jokes, showing movies, and putting on short skits for audience
- Planning an orderly way to get children in and out of auditorium

Make a map of play areas for all to use.

Take charge of fund-raising activities; e.g., paper drives.

Conduct an election.

A HOMEMADE MODEL OF A TELESCOPE SUPPLEMENTS CLASS STUDY OF THE SKY

CHAPTER VIII. SCIENCE AND HEALTH

Science in intermediate grades offers the more able child the opportunity to explore a variety of problems through which he may rapidly become skilled in the use of the scientific approach to problem-solving. When the able child identifies a problem, he collects much information about it from many sources and weighs each bit for reliability and validity; he proposes several solutions and tests each one; then he reaches a conclusion and substantiates it with evidence. He seeks the truth and prefers to discover it through his own efforts. He carries on many research problems outside the classroom, but often seeks guidance from the teacher. He reads many science books and periodicals and keeps abreast of new developments. He needs the opportunity to work on challenging problems, either his own or ones suggested by the teacher.

While many activities in the Intermediate Manual can be developed into projects for the able learner, the following suggestions for each unit will extend his interests and his competence.

Living Things

Although most children are interested in living things, the able child usually is more curious about them and needs a variety of rich experiences, such as the following, to satisfy this curiosity.

Help younger children set up and maintain a balanced aquarium.

Set up a balanced terrarium in a large glass container and care for it.

Give an illustrated talk on how to assemble, identify, and mount insects, flowers, or seeds.

Collect cocoons; identify and prepare for observation and safe keeping.

Learn how to take care of pets; prepare instructions on their humane care. Recommend animals that are suitable for pets.

Prepare agar cultures in Petri dishes. Leave some of them open to the air while others are tightly capped and sealed. After several days, study with a microscope or bioscope (available from Visual Aids Exchange) the micro-organisms which develop. Share experiment with the class.

Read to determine the relationship between micro-organisms and disease.

Study the causes of contamination of food; study laws and agencies functioning to assure a safe supply of food, water, and air. Prepare a list of cautions for your mother.

Find out the kinds and names of animals in the lower order of animals, such as mollusks and protozoa. Devise an illustrated chart for display.

Apply the scientific method to find answers to such questions as: "From what part of the seeds do shoots come? roots?" "What foods will this caterpiller eat?" Plan some way to share with classmates.

Make a study of pests dangerous to man; explore ways to exterminate them.

Energy

As the able child seeks to understand the world about him, he realizes the importance of the control and use of various forms of energy and often displays a particular interest in new forms of energy, such as atomic energy. The following experiences are suggested to help an able child develop a better understanding of this field.

Make a collection of toys which demonstrate scientific principles; label and display.

Keep a scrapbook of news items of the peaceful uses of the atom.

Find out about the production and use of commercial and industrial magnets.

Build a model home and wire it. (Caution: This should be checked by an adult to avoid the hazard of electric shock.)

Work out and set up the electrical circuits for a science quiz board.

Collect light bulbs of different wattage; explain the differences.

Find out how an electric meter works and learn to read one.

Make a study of the telephone; explain its operation through diagrams and discarded parts of a telephone.

Find out how Hi-Fi records are made and how they reproduce sound. Develop diagrams and experiments to show this.

Find out how radio and television transmit sound.

Make a simple radio or crystal set.

Explain how the solar system is either directly or indirectly the source of all energy on earth.

Plan an experiment to ascertain the speed of sound. Determine the relationship of temperature to speed of sound.

Show through pictures and diagrams how the body uses food.

Compute the caloric intake for a day and determine whether basic food needs are being met.

Explain the purpose of a basal metabolism test and tell how it is given.

Atmosphere and Weather

Able children usually find a study of atmosphere and weather fascinating, for it explains a condition that affects their daily lives. To develop an understanding of weather, the following experiences are suggested:

Collect weather sayings; determine whether they are scientifically sound or merely superstitions.

Assemble and set up equipment for distilling water; show relationship to weather phenomena.

Use the scientific method to determine what conditions will speed up or slow down the evaporation of water. Relate these findings to conditions as found in nature.

Make a weather station; read and interpret instruments.

Order and study U.S. Weather Maps, available at cost from the Superintendent of Documents, Washington 25, D.C.

Use maps and instruments to forecast weather.

Visit the weather bureau or station; report on trip to class.

Study and report on the kinds of lightning and their causes.

The Earth

As the able child undertakes a study of the earth, its history, its relation to the solar system, its natural resources, and its endless changes, he needs

many thought-provoking experiences such as the following:

Set up a prehistoric museum; make models and illustrations.

Find out the story of glaciers in Ohio; determine their effect on the land around Cincinnati.

Make scale models or drawings of dinosaurs and compare with size of man.

Make a time chart showing five billion years of the earth's age in scale and indicate what took place at various intervals.

Collect and classify fossils both as to type and as to period.

Survey and analyze the conservation needs of the community.

Make a study of minerals and their importance to our civilization.

Beyond the Earth

The able child often reveals a deep interest in outer space and is able to engage in many challenging activities which scientifically answer his questions and either satisfy his curiosity or lead to further activity. The following experiences are suggested:

Choose a particular planet for special study and observation.

Make a star finder. Plot the positions of several stars for one month.

Organize and lead an astronomy club.

Make a sundial and install it.

Find out how astronomers determine distance to the moon, sun, and the nearer stars.

Find out where and when to look for the five planets visible to the unaided eye. Make a chart showing this information.

Make a sun camera and find the size of the sun.[1]

Determine how to plot the sun's position and then plot it for one month.

Calculate how it would take supersonic planes and rockets of today to reach various places in our universe, using the current speed record.

Take star photographs; explain trails.

Make scale models of the solar system; adapt it to classroom display.

[1]Marie and Ira Freeman, Fun With Astronomy. New York: Random House, 1953.

Miscellaneous Experiences

Many science experiences for the able child are applicable to any unit. Others are related to science in general rather than a specific unit. The following are such activities.

Plan and maintain a poster of scientific facts; e.g., "Lightning is a giant electric spark." Add a new one each week.

Maintain a vocabulary chart with definitions, and if possible, examples, drawings, and pictures.

Assume responsibility for obtaining additional material for the class on any science topic. Write for materials and evaluate their usability.

Prepare a science game.

Compile a list of community resources including places of scientific interest and resource persons in the local community. Plan with the teacher for their use.

Form a group to investigate, by means of the scientific method, phenomena which cannot be explained. Example: "Why do some objects 'sweat'?" "Why does the wind whistle around windows?"

Make a notebook of outstanding current and pioneer scientists; include a brief biography and chief contributions.

Plan and organize a "Science Fair." Assume responsibility for publicity, exhibits, and programs.

Join an after school "Science Club." Members take special field trips, see movies, hold discussions, plan exhibits, science shows, and other similar experiences.

Become a class "expert" in some area of science.

Make a card file of science experiments performed at home.

Make a scrapbook of pictures from magazines which illustrate the applications of scientific principles.

Report on television programs concerned with science; analyze scientific principles, methods, and procedures.

Make a book of common superstitions and unscientific attitudes and try to refute them with scientific evidence.

Read biographies of famous scientists; repeat some of their experiments.

Collect, evaluate, and catalogue newspaper and magazine articles dealing with some aspect of science.

Record recent advances in science as reported on radio, television and press.

Plan a field trip. Plot the itinerary indicating points of interest, outline the trip for the class, serve as a guide, and evaluate the trip with the class.

Report on both sides of a controversial issue related to health; e.g., nuclear tests, fluoridation of water, or stream polution.

Study the lives and contributions of early scientists, such as Pasteur, Lister, and Koch, who contributed to our knowledge of health.

Community Resources

The community should be canvassed for appropriate experiences for the able child interested in science. Such resources would include both people and places in the local community or in the city. A scientist, who is a patron of the school, a University professor, or a naturalist might be glad to help in solving the child's problem. The teacher should acquaint the child with places such as the following:

Natural History Museum (The Natural History Museum offers many interesting exhibits and Saturday morning classes during the fall and winter.)

Observatory (Group tours may be arranged.)

Conservatory, Eden Park (Unique and unusual plant displays are offered.)

Cincinnati Public Parks (Hestor Stephenson, Trailside Museum, Burnet Woods, conducts classes over nature trails in any Cincinnati park.)

Aquatic Farms (Material for a terrarium or aquarium are available for purchase.) Lakeview, 5639 Kirby Avenue; Loveland, Montgomery Pike.

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Birds
Fishes
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Photography
Reptiles and Amphibians
Seashores
Stars
Trees
Weather

MASTERING STUNTS IN GYM BUILDS PRESTIGE AMONG CLASSMATES

CHAPTER IX. PHYSICAL EDUCATION

Usually the able child is a healthy, well coordinated youngster interested in the field of physical education and capable of outstanding achievement, provided he is in a class with his age mates. Generally speaking, the needs of the able learner are met in the present program of physical education activities. The upper elementary school years are ideal for initiating interest in sports and leisure time pursuits which carry over into adult life. Continued participation in these activities throughout one's entire life will contribute to the development of a well-rounded personality.

The child with outstanding skill in physical education is readily identified and usually needs little encouragement to perform or participate. It is the highly skilled performer, the fine hitter, the fast runner, the good dancer, or the capable leader who is usually found on school and community teams, dance programs, and sports demonstrations. Challenging activities, which not only satisfy the need of the skillful child for physical activity but also offer all able children an opportunity to develop responsibility and leadership, are suggested below for each area of the program.

Phases of the Physcial Education Program

Rhythmic Activities

Direct the class in preparatory movement in running, hopping, and skipping.

Select and conduct appropriate "warm-up" or conditioning exercises, utilizing various means of accompaniment.

Teach a dance step; review with the class a dance already learned.

Create dance steps to musical patterns; add new steps to a dance.

Lead the class in marching activities; call a square dance.

Learn to change rhythm and tempo when using a percussion instrument.

Games and Relays

Help classmates learn the correct technique for executing game skills; e.g., serving a volley ball, batting a softball, kicking a kick ball.

Help classmates improve performance in preparation for physical achievement tests.

Interpret rules of a game to classmates or team.

Diagram the position of players for a team game or the location of players during a specific game situation.

Teach a new group game such as "Three Deep" or relay to the class.

Officiate and score games occasionally. (The able child should not be excluded from play in order to officiate.)

Gymnastic Activities

Serve as a squad leader; demonstrate and assist squad members in learning skills on apparatus.

Learn to become an efficient "spotter" for safety of other squad members.

Evaluate and tabulate results on performance in executing mat stunts and stunts on apparatus.

Aid classmates in the proper use of equipment and recognition of the need for safety when working on apparatus.

Athletic Events

Learn to use a stop watch for timing dashes.

Serve as squad leader and assist in teaching athletic skills, in checking performances, and in recording results.

Learn to use a tape measure.

Learn to estimate distances.

Evaluate, tabulate, and complete results for performance of classmates in achievement tests.

General

Do research to locate a game or dance related to a social studies unit; teach it to the class.

Lead or assist the pupils in primary grades in playing games during the noon play period, on the playground, or in the classroom.

Assist the teacher in planning and evaluating the activity program for an extended period of time.

Extended School and Community Activities

The program of extended school activities for all children makes a special contribution to the development of the able child. He has the ability to assume responsibility under the teacher's guidance for organizing, conducting, and correlating such a program. His role will differ from that of the average child participating in any given activity in that he may be looked upon as a leader; children may turn to him for interpretation of the rules of the game; they may rely upon his keen observation for decisions. These opportunities are available to him through the following out-of-class activities:

Intramural team sports such as softball, kickball, volleyball

Recreational activities such as shuffleboard, paddle tennis, hopscotch, tetherball, four-square

Interschool competition in volleyball, stunt meets, and track meets

May Day and other types of school demonstrations

Invitational games with other schools

Club activities such as dance, tumbling, baton twirling

School Play Days

Able children need more opportunity for engaging in physical activities than the school program affords; they should be directed to neighborhood or community resources. As occasion arises, the teacher should encourage the child to participate in programs sponsored by such organizations as the Y.M.C.A., Y.W.C.A., Boys' Clubs, Recreation Commission, Knothole League, and Neighborhood Houses. Possibilities of day or summer camps may be explored with parents.

SCULPTURING AND FIRING ENAMELS FASCINATE YOUNG CRAFTSMEN

CHAPTER X. ART AND CRAFTS

Effective leadership in any area requires a creative approach to things, situations, and people. In our fast-moving world we cannot afford to allow those who are potential leaders to become cultural illiterates. Through a creative approach we work to foster the enrichment of life and the building of human values. Therefore, art experiences have value to the able child whether or not he has any special talent in this area.

The more able child may need frequent motivation because he tends to work at a rapid pace due to fluency of ideas. For this reason, the end result may not measure up to the complexities he has indicated in his planning. He must, therefore, be made aware of the importance of careful execution.

The child gifted in art is one who not only solves a problem with skill, but at the same time displays originality and imagination. One without the other cannot be thought of as giftedness. The needs of the able child in art are met by offering him a wider range of experiences and challenging materials with which to work. He needs freedom to select the activities and materials through which he feels he will be able to communicate his ideas and feelings, and guidance to realize his goals. He is more able to plan, execute, and evaluate his own activities.

Independent Experiences

The following independent experiences are suggested for all able children and are particularly applicable to the gifted in art.

Make a two-color registration in block printing.

Do textile printing with wood or linoleum block, simple silk screen, or stencil.

Perform art services for the school; e.g., lettering and making posters.

Sculpture with paper and other materials abstract forms of plant and animal life.

Construct individual molds from plaster.

Draw figures and portraits with emphasis on detail to develop observation.

Create unusual patterns and designs in weaving.

Use sketch books independently outside of school for recording impressions of their everyday experiences.

Study art periodicals and books on art available at the library.

Report on art exhibits such as those in the Children's Reading Room at the main library and local exhibit centers.

Observe murals and mobiles at Terrace-Hilton.

Observe beauty in various nature forms such as shells, fossils, trees, insects, etc.; share observations with class.

Arrange an artistic setting for a hobby collection.

Study the works of a great artist; compare his concepts and style with that of another artist.

Study art through the ages; e.g., prehistoric art of the cavemen, brush paintings of ancient Chinese, etc.

Work with parents in planning home decorations.

Attend free art classes for children at the Art Museum on Saturday morning.

Take advantage of the summer art offered in the regular Cincinnati Summer School Session for children who are finishing the sixth grade.

Group Experiences

The following group experiences are suggested as appropriate for the able child:

Serve as a chairman or member of a group in the selection and placement of a gift purchase such as an art form for the school.

Give leadership to a group that has responsibility for murals, display cases, and other beauty spots in the halls and rooms.

Recommend, as group member or leader, to the teacher a reproduction of a masterpiece to be borrowed from the Art Museum library.

Contribute to a group by making scenery or properties for a school play.

Participate in an after-school art club with classmates.

Visit Krohn Conservatory in Eden Park, Taft Museum, the Art Museum, and Museum of Natural History.

Observe architecture in the community; study churches and synagogues; study public buildings denoting different styles and periods; e.g., Taft Museum, Union Terminal, Terrace-Hilton.

Experiences with Challenging Materials

A variety of challenging materials is particularly important in exploration and experimentation for the able child. The following experiences are suggested:

Experiment with new and unusual media such as sculp-metal and styrofoam.

Work in new ways with familiar media; e.g., use chalk shavings in mosaics; mix tempera with plaster for a marbleized effect; shave chalk dust on paper coated with water or buttermilk; combine wire sculpture with dabs of tinted plaster; create egg shell mosaics.

Use wire, wood or combinations of a selected variety of materials to make mobiles and stabiles with emphasis on line, texture, form, and motion.

Experiment with transparent, translucent, and opaque materials.

Do tye-dyeing and other work using batik and resist processes.

Community Resources

Through conferences, parents can be encouraged to explore the many community opportunities for a child gifted in art. The following are places of interest:

Exhibits in Children's Reading Room, Public Library, Eighth and Vine Streets

Krohn Conservatory in Eden Park; Natural History Museum; Taft Museum

Saturday Morning Classes (Free art lessons in painting, drawing, ceramics, and the like available to children age 7-15 who manifest a special interest in art. No charge for either materials or instruction.)

Saturday Morning Movies (Movies selected for educational content and suitable for children age 6-13 are presented free in the auditorium at 9:30 and 10:30. Films are furnished by Public Library.)

Summer Classes in Drawing, Painting, and Ceramics (Those who attend classes regularly during the year on Saturday morning and wish to continue may attend outdoor painting and ceramic classes that meet for six weeks during the summer.)

ADVANCED ACTIVITIES CHALLENGE YOUNG MUSICIANS

CHAPTER XI. MUSIC

Many able children are interested in music and through understanding its many facets, learn to cherish our musical heritage. Musical ability and appreciation developed in childhood usually endure through adulthood and contribute significantly to a well balanced program of living. A love of music through understanding is achieved by offering all able children many experiences in ear training and rhythmic training as well as many opportunities to develop intellectual and emotional responses to music.

The child with special music ability shows keener aural perception, more accurate rhythmic response, has superior intellectual response and more mature emotional response to music than other children. It is the responsibility of the school to develop this aptitude by offering such a child an enriched school program and by working with parents so that he will be encouraged and stimulated at home. Teachers should do their part to see that gifted pupils have access to the full resources of the community. In addition to private teachers, there are musical opportunities and experiences in connection with the Young People's Concerts of the Cincinnati Symphony Orchestra, the Cincinnati Civic Orchestra, the Cincinnati Summer Opera, the Children's Chorus of the May Festival, concerts at the Conservatory of Music, and recordings at the Public Library.

The following activities are suggested for all able children, but are particularly applicable to the specially talented group.

Singing

The able child sings with a superior tone quality because of a better understanding of tone production. Because of mature emotional response, he can create a finer interpretation of music. He has a keen harmonic sense which enables him to improvise harmonies. He may -

Sing in a school choir or ensemble, a church choir, or out-of-school group.

Assist his peers in mastery of song materials; e.g., carry the harmony of a song.

Sing as a soloist for a special school program.

Participate in various all-city choral festivals.

Lead group singing.

Participate in musical achievement programs available in community youth organizations; e.g., Girl Scouts.

Reading Music

The able child is expected to make rapid progress in music reading skills and to reflect superior achievement in part singing. He might -

Take the lead in solving tonal and rhythmic problems.

Transpose music for accompaniment on autoharp, for clarinet and trumpet parts, or any similar transposition.

Make a dictionary of musical terms and symbols.

Learn to follow an orchestral score.

Listening

Many listening experiences of able children will be similar to those of all children, but the able child will acquire a deeper meaning because of his mature emotional response.

Listen to recordings of different interpretations of the same music; critically compare them.

Listen to the music of a great composer to determine what it expresses; study the life of the composer; report to the class.

Give a constructive criticism of a performance by the Cincinnati Symphony Orchestra.

Attend Cincinnati Summer Opera; learn the story of the opera; critically evaluate the portrayal of roles.

Critically compare musical selections heard on radio and television programs.

Identify musical themes by sight and sound.

Interpret mood, story, and musical forms of recorded music.

Prepare to participate in a special radio or television musical program.

Creating

Thinking, exploring, and creating original melodies and harmonies, rhythms, interpretations, and dramatizations challenge the able child. He may -

Submit an original composition to the Cincinnati Symphony for consideration in their annual contest.

Compose an original song for a special occasion.

Assume leadership in developing an original cantata.

Write a play involving the music of a composer or country.

Create rhythmic patterns for a special event such as the delivery of valentines.

Compose original dances suggested by music; teach others.

Add new, original verses to a song.

Playing Instruments

Study of an instrument contributes much to the able child's musical growth; it gives him a good foundation for acquiring musical skills and leads to a further musical success. Usually, it affords him a feeling of great personal satisfaction and often brings him recognition from his own age group which children value so highly. The following experiences are suggested:

Experiment with melody, harmony, and rhythm instruments available in the classroom.

Perform as an instrumental soloist or accompanist.

Play in instrumental ensembles.

Participate in a program of special instrumental instruction available in the school or community.

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